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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Toshihiko Oyama

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EXAMINER

HAFIZ, MURSALIN B

ART UNIT

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2814

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,798	Applicant(s) OYAMA ET AL.	
	Examiner Mursalin B. Hafiz	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/26/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on December 26, 2006 is hereby acknowledged.

Claims 1, 5, 13 and 19 are amended and claim 21 is newly added.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the lens" in line 2. There is insufficient antecedent basis for this limitation in the claim. The amendment of claim 5 does not overcome the rejection. Claim 5 depends on claim 21, which depends on claim 1; claims 1 and 21 does not mention any lens.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Okazaki (US 6,653,661 B2).

Regarding claim 1, Okazaki disclose in Fig. 11 and 12, a semiconductor light emitting device comprising a metallic support plate [3a]; a light-reflective reflector [15] mounted on the support plat and formed with a hole upwardly diverging; a semiconductor light emitting element [1] mounted on the support plate within the hole of the reflector, the light emitting element having a first electrode electrically connected to the support plate; a first wiring conductor [2] electrically connected to the support plate; a second wiring conductor [2] electrically connected to a second electrode of the light emitting element; and a heat-resistible plastic encapsulant [4] formed of opaque or semi-transparent resin [column 9 lines 35-40] for sealing at least an outer periphery of the reflector [15], an upper surface of the support plate, each inner end of the first and second wiring conductors, wherein the plastic encapsulant is provide with an opening through which the hole and an upper surface of the reflector are visible from outside of the plastic encapsulant.

Regarding claim 2, Okazaki disclosed in Fig. 11, a lens [7] formed of light transmittable or transparent resin [column 10, line 61] for covering upper surface of the reflector [15] and plastic encapsulant [4].

Regarding claim 3, Okazaki disclosed in Fig. 11, a light-transmittable or transparent cover [8] for covering a hole of the reflector.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 21 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki (US 6,653,661 B2).

Regarding claim 4, Okazaki disclosed supporting plate [2] is formed of a metallic material. But, fails to explicitly disclose the material having conductivity equal to or more than 190 kcal/mh°C. However, the range would have been obvious to an ordinary skilled in the art because, absent evidence of disclosure of criticality for the range giving unexpected results, it is not inventive to discover optimal or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). Furthermore, the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. See *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

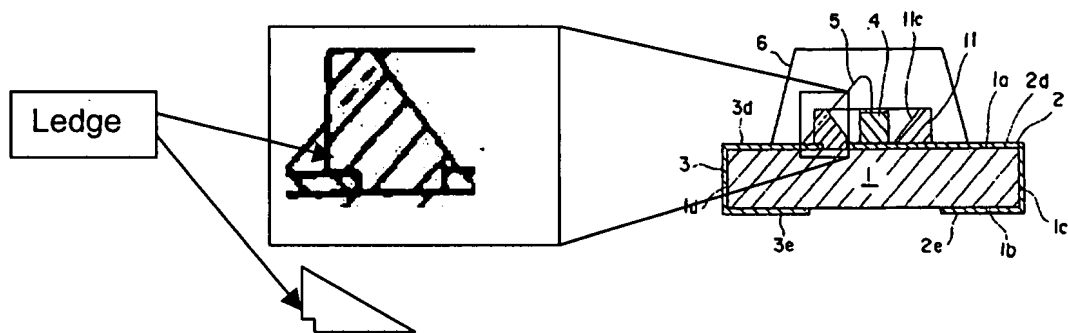
Regarding claim 21, Okazaki disclosed the plastic encapsulant is formed of resin. But fails to explicitly disclose the resin is black epoxy resin. However, the material would have been obvious to one of ordinary skilled in the art at the time of the invention

to interchange material for cost. Moreover, selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co., Inc. v. Interchemical Corp.*, 325 U. S. 327, 65 USPQ 297 (1945).

Regarding claim 5, Okazaki disclosed the lens [7] is formed of a resin. But, fails to explicitly disclose the melting point lower than that of the plastic encapsulant. However, the range would have been obvious to an ordinary skilled in the art because, absent evidence of disclosure of criticality for the range giving unexpected results, it is not inventive to discover optimal or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). Furthermore, the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. See *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

5. Claims 1, and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (JP 11340517 A) in view of Okazaki (US 6,653,661 B2).

Regarding claim 13, Honda disclosed in Fig. 2, a semiconductor light emitting device comprising a support plate [2d]; a light-reflective reflector [11] mounted on the support plate and formed with a hole upwardly diverging; and a semiconductor light emitting element [4] mounted on the support plate within the hole of the reflector;



Wherein the reflector has a ledge connected to a wiring conductor to electrically connect the light emitting element and wiring conductor through the ledge.

Honda does not explicitly disclose the reflector is electrically conductive. However, Okazaki disclosed a metal reflector [15] which is inherently electrically conductive. It would have been obvious to one of ordinary skilled in the art use metal reflector, as it is well know that metal has good reflector quality. Moreover, selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co., Inc. v. Interchemical Corp.*, 325 U. S. 327, 65 USPQ 297 (1945).

Regarding claim 14, Honda disclosed the ledge is electrically connected to the wiring conductor via brazing metal [product by process].

Regarding claim 15, Honda disclosed in Fig. 2, a lead wire [5] electrically connects the semiconductor light emitting element and flat area formed in the reflector.

Regarding claim 16, Honda disclosed in Fig. 2, a reflector for a semiconductor light emitting device, comprising:

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a reflector block [11] mounted on a support plate [2d] and formed with a hole for defining a reflective surface upwardly expanding, the reflector block surrounding a semiconductor light emitting element [4] for upwardly reflecting light from the semiconductor light emitting element;

a notch [where wire 5 pass through the reflector] extending through the reflector block from the hole to an outer side surface between the semiconductor light emitting element [4] and wiring conductor [3d]; and

a lead wire [5] passing through the notch for electrically connecting the semiconductor light emitting element and wiring conductor.

Regarding claim 17 and 18, Honda disclosed in Fig. 2, filler received in the notch through which the lead wire extends and filler forms a part of the reflector [product by process limitation, end product is product of Fig. 2].

Allowable Subject Matter

6. Claim 19 is allowed.

The following is an examiner's statement of reasons for allowance:

The prior art of record is neither anticipated nor rendered obvious all the limitations of the claim 19 including the reflector has a notch which passes through the reflector block between the hole and an outer side wall and between the light emitting element and wiring conductor, the lead wire passes through the notch to electrically connect the light emitting element and wiring conductor in combination with other limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicant's arguments with respect to claims 1-5, 13-18 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mursalin B. Hafiz whose telephone number is 571-272-8604. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mbh



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PRIMARY PATENT EXAMINER